Technical Information



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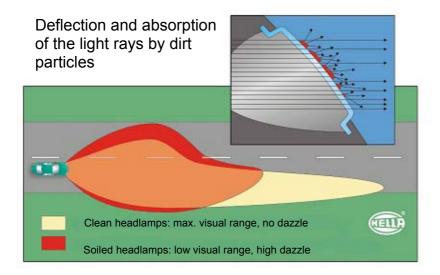
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Headlamp power wash systems

General information:

According to legislation, a headlamp power wash system is compulsory in the case of vehicles with Xenon light. In the case of halogen light as well, these systems make sense for the following reason.

The influence of soiled headlamps on driving safety:



Design and function:

A complete Hella cleaning system is made up of the following components:

- Vortex chamber nozzles with different water distribution patterns in stationary or telescopic nozzle systems
- Switch valves / central valve.



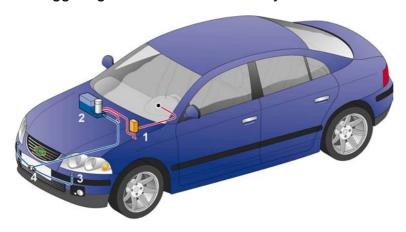
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- Hose assembly with plug connections.
- Water tank with centrifugal pump.
- Triggering: electronic timer or relay.



1 Timer

- 2 Water tank with pump
- 3 Nozzles / telescopic nozzles 4 T-piece or central valve

Usually, the SRA [German abbreviation for headlamp power wash system] is triggered together with the windscreen wiper system. Every time the driver operates the windscreen washers, the headlamps are automatically cleaned at the same time. This coupling of functions only takes place when the lights are switched on.

When the centrifugal pump is triggered, it pushes water into a cylinder, the piston of which is fitted with a nozzle head and extends against a pressure spring and brings the nozzles into their working position. Until this position has been reached, a valve ensures that at first only the movement is carried out, without any water for cleaning escaping from the nozzles. Once the working position has been reached, the valve opens and water is sprayed onto the headlamp. When the pump switches off, the return spring drives the piston back into its resting position. A washing pulse takes around 0.5 s. in the case of stationary nozzles and about 0.8 s in the case of telescopic nozzles (due to extension time).



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Reasons for failure:

- Centrifugal pump is not working
- Hose is leaking
- Blocked or faulty valve
- Blocked nozzle
- Damaged telescopic arm

Fault diagnosis:

 If the centrifugal pump des not work when the washing function is triggered (running sound can otherwise be clearly heard), the voltage supply must be checked, including fuses.

If the pump is working but the water cone sprayed only onesided or very weakly, the following causes are possible:

- Motor-driven pump could have reverse polarity: Check polarity, since centrifugal pumps work in both directions of rotation, only the hydraulic capacity is different.
- System not vented: Vent the system completely by activating it several times in succession without a pause.
- Hose kinked or leaking: Check how the hoses are laid and correct this if necessary. Seal leaks or repair hoses as required.
- **Nozzles or valves blocked:** Remove foreign bodies by flushing out the system.
- Structural elements iced up: Increase the concentration of anti-freeze. The components will not be destroyed by being iced up, however.

